RABIES BULLETIN EUROPE

Volume 16/No 3

Quarter 3

1992

Contents

	Page
1. Introduction	3
2. Summary of Rabies in Europe	3-4
3. Rabies in Individual Countries	4-9
4. Miscellaneous Articles	
4.1 Information on recent WHO publications	10
4.2 First Case of Rabies in a Bat in Switzerland	11
4.3 Oral Vaccination of Foxes in Europe, 1992	12-13
5. Rabies Case Data Europe	
5.1 Table 1: 3. Quarter 1992	14
5.2 Table 2: 1 3. Quarter 1992	15
5.3 Table 3: Other Animal Species, 3. Quarter 1992	16
5.4 Tables : Individual Countries, 3. Quarter 1992	17-33
6. List of Contributors	34
7. Annexes	
Map of Rabies Cases in the European Part of Russia, 3. Quarter 1992	Annex 1
Map of Rabies Cases in Turkey, 3. Quarter 1992	Annex 2
Map of Rabies Cases in Europe, 3. Quarter 1992	Annex 3

The Rabies Bulletin Europe has been compiled and edited by the

WHO Collaborating Centre for Rabies Surveillance & Research

Federal Research Centre for Virus Diseases of Animals Postfach (P.O.Box) 1149 D-7400 Tübingen

Federal Republic of Germany

Dr. L.G. Schneider, Director Dr. W.W. Müller, Ass.Director K.-P. Hohnsbeen, Data Processing Phone (0)-7071-603-332 Fax (0)-7071-603-201 Telex 17-7071-31 The Rabies Bulletin Europe is sponsored by the World Health Organization, Geneva and the International Office of Epizootics, Paris

Gratefully acknowledged is the financial support of the WHO Rabies CENTRE Tübingen by the

Bundesministerium für Gesundheit Bonn - Bad Godesberg

1. Introduction

This BULLETIN describes the reported rabies cases in Europe for the **Third Quarter 1992**, subsequently referred to as "This Quarter".

In SECTION 2 a summary of the rabies situation in general is given.

SECTION 3 (3.1-3.35) reflects the situation for individual countries.

In the Miscellaneous SECTION under 4.1 information is given on three more recent publications of WHO. 4.2 describes the first bat rabies case in Switzerland. Oral vaccination of rabies against foxes 1992 reflects on where we stand in Europe at this time. It is presented under 4.3.

The rabies case data are

tabulated for the third quarter 1992 in SECTION 5.

SECTION 6 lists the official contributors to the BULLETIN.

The geographical distribution of rabies cases in Europe for the third quarter 1992 is shown on maps of Europe, the Russian Federation (European part only) and Turkey in the ANNEX.

2. Summary of Rabies in Europe

During "This Quarter", 2119 rabies cases were reported in Europe. Of these were 1627 in wild animals (76.8% of total), 490 in domestic animals and there were 2 human cases.

Of the cases in wild animals 1400 were foxes, 64 raccoon dogs, 27 badgers, 61 other mustelids, 1 wild cat, 56 roe deer, 1 red deer, 2 fallow deer, 1 wild boar, 1 hedgehog, 7 bats, 1 squirrel, 2 black rats, 1 house mouse, 2 other wild animals. Of the 490 domestic animals 110 were dogs (and 47 of these were diagnosed in Turkey, a country with dog-

mediated rabies), 126 cats, 220 cattle, 13 sheep, 10 goats, 8 horses,s 1 donkey and 2 other domesticated animals. These data are presented in TABLES 1 and 3, SECTION 5.

TABLE 2 summarizes the quarters 1-3/92 in Europe. If compared to the same time span in 1991 (12 944 cases) a drastic reduction of cases can be noticed for this year (7 873 cases).

Because of the dispersal of juvenile foxes (more contacts in search of new territory) during the third quarter, a seasonal increase of rabies cases is expected in countries with fox-mediated rabies. Examples during "This Quarter" are Poland and Hungary. For countries practicing one or more oral vaccination campaigns a year this pattern does not necessary follow any more. Even a drastic reduction of cases can be noticed, as can be seen in Austria and France for "This Quarter" (see as well the article on oral vaccination under 4.3 of this issue).

There is only one country in Europe following a dogmediated rabies pattern - Turkey. 97% of all cases are in domestic animals.

Bat rabies has again a different pattern. It has its seasonal peak in the third quarter with activities in bat populations (raising of young, mating, in some species migration). There were reports from 3 countries during "This Quarter": the Netherlands (5 cases), Germany (1) and for the first

time in Switzerland (1).

Two human cases were reported from the Russian Federation.

Rabies-free countries in Europe participating in the surveillance were: Denmark, Finland, Greece, Iceland, Ireland, the mainland of Norway, Portugal, the mainland and islands of Spain, Sweden, and the United Kingdom of Britain and Northern Ireland.

There were no cases reported during "This Quarter" from Luxembourg and from Svalbard of Norway, but the last indigenously acquired case (in terrestrial animals or bats) was recorded less than two years ago.

3. Rabies in Individual Countries

3.1	Albania	ALB
	No data.	

3.2 Austria AUT

by Helmut Schnabl

Of 8 608 samples examined during "This Quarter", 122 (1.41%) were diagnosed rabid. There has been a decrease of rabies cases in comparison with the previous quarter (283 cases) by 56.9%.

113 of the rabies cases during "This Quarter" occurred in wild animals (92.6% of total) and 9 in domestic animals (7.4%). The distribution of these animals was as follows:

Wild animals - 91 foxes, 3 badgers, 7 martens, 12 roe deer;

<u>Domestic animals</u> - 6 cattle. 1 horse and 2 cats.

The distribution of rabies cases by <u>Bundesländer</u> (federal provinces) and Bezirke (districts) was as follows:

<u>Burgenland:</u> 1 case in the Bezirk Oberpullendorf.

Niederösterreich: 60 cases (49.2% of total) in the Bezirke Baden, Hollabrunn, Korneuburg, Lilienfeld, Mistelbach, Mödling, Neunkirchen, Scheibbs, St. Pölten, Waidhofen/Thaya, Wien/Umgebung and Wiener Neustadt.

Oberösterreich: 4 cases in the Bezirke Freistadt and Perg. Salzburg: 7 cases in the Bezirke Hallein and Salzburg/Umgebung.

Steiermark: 1 case in the Bezirk Bruck/Mur.

<u>Tirol:</u> 17 cases in the Bezirke Innsbruck-Land and Landeck. <u>Vorarlberg:</u> 28 cases in the Bezirke Bludenz and Bregenz. <u>Wien:</u> 4 cases in the Bezirk Wien.

3.3	Belgium	BEL
	by J. Tambeur	

During "This Quarter", only one case of rabies was confirmed in a fox in July, at Herbeumont.

A new autumn campaign of oral vaccination of foxes is going to be started at the end of September. An area of 9000 km² is going to be covered and 135.000 vaccine baits will be distributed from an aircraft flying at 100 m altitude.

3.4	Bulgaria	BUL
	No data.	
3.5	Belarus	вуЕ
	No data.	

3.6 Croatia

CRO

3.7 Czechoslovakia CZE

Germany, DEU Federal Republic

by Mate Brstilo

During "This Quarter", 27 rabies cases were registered in Croatia. Of these were 23 in wild animals (85.2% of total) and 4 in domestic (14.8% of total). Of the cases in wild animals 22 (81.5%) were foxes and 1 (3.7%) marten. Fox rabies cases were diagnosed in 12 different municipalities, the one marten in the municipality Vinkovci.

Of the 4 domestic animals 3 were cats and 1 was a dog. The three cat rabies cases were diagnosed in the municipalities Duga Resa, Novska and Vinkovci, the one dog in the municipality Sisak.

During "This Quarter" rabies cases were registered in three new municipalities: Delnice (2 foxes), Novska (1 cat) and Zadar (1 fox).

The following points were noteworthy during "This Quarter":

- in the region of the peninsula Istra there was no rabies case,
- in the coastal area rabies was registered only in one case in the municipality Zadar,
- cases were more concentrated along the border area of Slovenia.

by Oldrich Matouch

A total of 119 rabies cases in animals were reported in Czechoslovakia during "This Quarter" (67 in the Czech Republic and 52 the in Slovak Republic). Of these 105 were in wild animals (99 foxes, 6 martens) and 14 in domestic animals (3 dogs, 10 cats, 1 bovine).

There has been a reduction of rabies cases in comparison with the same period of last year by 50.1% and with the previous quarter by 18.5%.

The geographical distribution of cases showed a significant improvement of the rabies situation in the districts practicing oral vaccination. Several districts (Cheb, Sokolov, Domažlice, Klatovy) bordering with Germany were rabies-free. The majority of rabies cases was concentrated in areas where oral vaccination was not practiced yet. The highest figure of cases was noticed in the region of East Slovakia (24), followed by West Slovakia (19) and East Bohemia (19).

3.8 Denmark DEN

by Eric Stougaard

The country remained rabies-free.

by Winfried W. Müller and Thomas Müller

3.9

A total of 310 rabies cases was reported during "This Quarter", 40 cases more than during the previous quart-

Four of 16 Bundesländer (federal states) had no rabies: Nordrhein-Westfalen, Schleswig-Holstein and the city states Bremen and Hamburg. Four Bundesländer reported very few cases: Hessen (2), Thüringen (1), Berlin (1) and Sachsen (4).

Looking back on data by quarters until 1977 when the European surveillance started, a drastic improvement of rabies in the area of the 5 "new federal states" can be noticed. With 83 cases during "This Quarter" (city state Berlin excluded) the lowest figure for one quarter is registered. This can be compared to a peak of 1018 cases during the third quarter 1989. The 83 rabies cases during "This Quarter" are 1.6% of 5325 samples examined.

An increase from 70 cases (previous quarter) to 120 cases was reported from the Bundesland Baden-Württemberg. Here were three very active rabies foci: two older ones in the north and southeast and the area infected at the beginning of this year in the southwest. One case occurred in the centre of the Bundesland which was rabies-free for a long time. It was a dog rabies case introduced from Hungary.

There was one bat rabies case in Niedersachsen near Bremen.

Oral vaccination was organized by the Bundesländer for summer and/or autumn campaigns according to the epidemiological situation of the areas.

3.10 Estonia EST

by M. Nautras

During "This Quarter", 21 rabies cases were registered from Estonia, 2 cases more than during the previous quarter. There were 16 cases in wild animals (7 foxes, 8 raccoon dogs and 1 roe deer) and 5 in domestic animals (1 dog, 1 cat, 3 cattle).

Cases occurred more in the eastern half of the country.

3.11 Finland FIN

by Bengt Westerling

The country remained rabies-free.

During "This Quarter" a total of 56 animals, including 2 dogs, 5 cats, 13 foxes, 22 raccoon dogs and 5 bats were examined for rabies by immunofluorescence on brain tissue, all with negative result.

In September 80.000 Tübingen vaccine baits were distributed by air on a 20-25 km deep and 250 km long zone along the south-eastern border with Russia, covering a land area of approx. 4.000 km².

3.12 France FRA

by Michel F.A. Aubert

During "This Quarter", 186 rabies cases were registered, 330 cases less compared to the same period one year ago (a diminution of 64%).

The rabies cases were mainly located in areas not yet treated by oral vaccination of foxes.

For the first time the oral vaccination was practiced at the beginning of August to protect the young foxes born earlier in the spring. For the first time as well the vaccination campaign is going to cover the entire area contaminated in France (111.600 km²). The campaign is going to end in mid-October.

3.13 Greece GRE

by A. Katsaounis

The country remained rabies-free.

3.14 Hungary HUN

by Balint Kerekes

During "This Quarter", 190 rabies cases were diagnosed in Hungary, 83 cases more than during the previous quarter.

There were 151 cases registered in foxes (79.5% of total), 3 in other wild animals and 36 in domestic animals (4 dogs, 21 cats, 8 cattle, 1 horse, 2 sheep).

The western half of the country was more affected by rabies compared to the eastern half.

Starting on the 19th October 1992 oral vaccination of foxes is going to be practiced along the Austrian border for the first time. A vaccination belt 25 to 50 km wide is going to cover an area of about 5000 km². "Fuchsoral" (SAD B19) vaccine baits are going to be used and they will be distributed from an aircraft with an earth satellite navigation system (GPS-Geographic Position System).

The oral vaccination started in the west is intended to be expanded eastward.

The oral vaccination is an initiative of the Ministry of Agriculture.

3.15 Iceland ICE

The country remained rabies-free.

3.16 Ireland IRE

The country remained rabies-free.

3.17 Italy ITA

by Santino Prosperi

During "This Quarter", 6 cases of rabies have been diagnosed - 4 in foxes and 2 in roe-deer. All cases were reported in provinces previously infected - in Friuli Venezia Giulia Region, in areas bordering Slovenia.

3.18 Lithuania LTU

by Algis Dranseika

During "This Quarter", 23 cases of rabies were diagnosed in 14 districts. Of the 23 cases 12 were cattle, 5 cats, 3 dogs, 2 foxes, and one pine marten. Among the dogs and cats were strays

More than 30 000 dogs and 2 000 cats received preventive rabies vaccination during "This Quarter".

3.19 Luxembourg LUX

by Joseph Kremer

There was no rabies case registered during "This Quarter". The last case diagnosed rabid was in a bovine in January 1992.

The second oral vaccination campaign of this year was carried out from 21 to 25 September 1992. About 50.000 vaccine baits were distributed by helicopter. It is expected that with an increase in the

number of foxes immunized the country can definitely be protected against rabies.

Two foxes and 3 martens were examined for rabies during "This Quarter", but reveiled negative results.

3.20 Latvia LVA

by Ziedonis Andersons

A total of 32 rabies cases was reported during "This Quarter", in 30 localities of 17 districts. There was only one case less reported compared to the previous quarter, and 32 cases less than during the third quarter 1991. There were 9 districts free of rabies during "This Quarter".

Of 21 rabid wild animals (65.6% of total) 13 were foxes, 6 raccoon dogs, 1 badger, 1 pine marten. Of 11 rabid domestic animals 5 were dogs, 5 cats, 1 bovine.

The most affected district of the country was Ogre with 10 cases.

There was no human rabies case in Latvia.

3.21	Moldova	MLD

No data.

3.22 Netherlands NET

by J.H.M. Nieuwenhuijs

During "This Quarter", 192 animals (88 adult foxes, 2 young foxes, 2 cats, 16 badgers, 1 dog, 1 cow and 82 bats) were investigated for rabies. 5 bats were diagnosed rabid.

Of the 82 investigated bats 4 were from the Blijdorp Zoo in Rotterdam of a colony of Rousettus aegyptiacus, 78 were indigenous species collected from different parts of the country.

3.23 Norway NOR

by Gudbrand Bakken

The mainland of Norway remained rabies-free.

No case of rabies has been reported in Svalbard during "This Quarter".

3.24 Poland POL

A total of 776 rabies cases was reported in Poland during "This Quarter", 409 cases more than during the previous quarter (367) and 133 more compared to the third quarter 1991 (643).

532 cases occurred in foxes (68.6% of total), 49 in raccoon dogs and 62 in other wild animals; 133 cases occurred in domestic animals (12 dogs, 38 cats, 81 cattle, 1 sheep, 1 other domesticated carnivore).

The most affected provinces were in the western half of the country: Poznan (75 cases), Wroclaw (62), Zielona Gora (50), Gdansk (48), Koszalin (46), Szczecin (44), Byd

goszcz (40). All other provinces reported less than 33 cases.

3.25 Portugal POR

The country remained rabies-free.

3.26 Romania ROM

by Horatiu Olaru

During "This Quarter", 10 rabies cases were diagnosed. 5 cases were in foxes, 2 in other wild animals and 1 each in a dog, a cat and a bovine.

The cases occurred in 5 of 41 provinces.

3.27 Russia RUS (European part only)

by V.A. Vedernikov, S.A. Chernichenko and B.L. Cherkasskiy

During "This Quarter", 139 rabies cases in animals were registered in the European part of Russia. Of the total number of cases 113 were in domestic animals - 20 dogs, 13 cats, 2 horses, 77 cattle, 1 donkey. Of 26 wild animals rabies was diagnosed in 21 foxes, 1 raccoon dog, 1 marten, 1 polecat, 2 rats.

There were 2 human cases, one in Tula region and one in Rostov region.

The 2 rats were diagnosed rabid in Perm region (Kungur) and in Stavropol region (Karachaevo-Cherkessyia). The rat case occuring in Kungur was confirmed by Mouse Inoculation Test. It is interesting to note that Perm region was rabies-free for more than 30 years. Perhaps the disease was brought in from the Ural mountains of the Asian part of Russia. The one donkey case occurred in Klin in Moscow Region. This donkey was brought from Asia and used in an animal show.

3.28 Spain SPA

by T. Maté Maté

During "This Quarter", the mainland and islands of Spain remained rabies-free.

There was one dog rabies case in Melilla (Spanish territory in North Africa).

3.29 Slovenia SVN

by Armin Tomašič

During "This Quarter", 43 cases were reported in Slovenia. There were 39 cases in wild animals (36 foxes and 3 stone martens), and 4 cases in domestic animals (2 dogs, 1 cat, 1 bovine).

There was a concentration of cases in the southwest of the country.

3.30 Sweden SWE

The country remained rabies-free.

3.31 Switzerland SWI

by Andreas Kappeler

During "This Quarter", the Swiss Rabies Center received 602 animals for examination. 20 (3.3%) of these were positive for rabies. In the previous quarter 42 cases had been recorded (9.3% of 454), whereas 24 of 536 (4.5%) were positive in the third quarter of 1991. 17 cases were observed in foxes, 2 in badgers, and 1 in a bat (Myotis daubentoni). This was the first case of bat rabies in Switzerland (see under 4.2 in the Miscellaneous section).

Still, the majority of cases were located in the vicinity of Basel, in the north of the country. Two cases in foxes were found in considerable distance from this focus, one on the southern slope of the Jura Mountains and one in the 'Seeland' (Swiss Midlands). There, a first case had been diagnosed in June 1992, more than six years after any other cases in that particular area.

In September, October and November, oral vaccination campaigns are going to be performed on a surface of 4 400 km². Some 70,000 baits will be distributed in the Jura Mountains along the border to France, in the 'Seeland' and in the Principality of Liechtenstein. The latter area has been vaccinated for the first time since 1986, due to the increasing number of rabies cases in neighbouring Vorarlberg, Austria.

18 bats were submitted for analysis during the reporting period. 4 Eptesicus serotinus and 1 Pipistrellus pipistrellus were unsuitable for examination. Of the remaining 13 (3 Pipistrellus pipistrellus, 1 Pipistrellus nathusii, 3 Myotis myotis/blythi, 2 Myotis daubentoni, 2 Plecotus auritus, 1 Nyctalus noctula, 1 Nyctalus leisleri) one Myotis daubentoni was found to be positive for rabies (see under 4.2 of this BULLETIN).

reported from Turkey, 38 cases less than during the previous quarter.

There were 65 cases in domestic animals (97% of total), and 2 cases in wild animals. The epidemiological rabies pattern is determined by dog-mediated rabies (47 dog cases = 70.1% of total).

Cases were more concentrated in the western part of the country and in a few provinces in the south (Gaziantep Adana, Adiyaman).

3.32 Turkey TUR

During "This Quarter", 67 rabies cases were 3.33 Ukraine UKR

No data.

3.34 United Kingdom UNK

by P.J. Thomas

The country remained rabies-free.

3.35 Yugoslavia YUG

by Dušan Jakovljević

19 rabies cases were reported during "This Quarter", all from Vojvodina. The cases were registered in 15 foxes, 2 dogs and 2 cats.

4. MISCELLANEOUS ARTICLES

4.1 Information on recent WHO publications

4.1.1. WHO Expert Committee on Rabies

Eighth Report - 1992 / WHO Technical Report Series 824

The seventh report was published in 1984. Thus, the new report considers the advances in rabies research and elaborates on all important aspects in relation to rabies with up-to-date knowledge. It contains the collective views of an international group of experts which met to write this report from 24-30 September 1991 in Geneva.

The book is a publication of WHO and can be obtained from Distribution and Sales, World Health Organisation, 1211 Geneva 27, Switzerland.

4.1.2 Wildlife Rabies Control

Proceedings of the International WHO Symposium on "Wildlife Rabies Control", Geneva 2-5 July, 1990 a n d

Report of the WHO Seminar on "Wildlife Rabies Control", Geneva, 2-5 July 1990

The book is edited by K. Bögel, F.-X. Meslin and M. Kaplan and published by Wells Medical Ltd., Chapel Place, Royal Tunbridge Wells, Kent TN1 1BP, United Kingdom

The lectures were collected under 3 headings:

Session 1: Host Species Ecology and Rabies Epidemiology (13 papers)

Session 2: Rabies Vaccines and Immunization (20 papers)

Session 3: Control Procedures (13 papers).

After the papers a report of the WHO Seminar on "Wildlife Rabies Control" is added.

4.1.3 3rd Consultation on Oral Immunization of Dogs against Rabies

WHO Report WHO/Rab./92.38 on a meeting held in Geneva, 21-22 July 1992

The purpose of the meeting was to review the major developments which had taken place in the oral immunization of dogs since the Second Consultation in July 1990, to evaluate recent results acquired using current or new vaccines and baits in dogs and to further assess, on the basis of data collected in canine rabies infected countries, the feasability of large scale oral vaccination trials in dogs.

4.2 First Case of Rabies in a Bat in Switzerland

by Andreas Kappeler Veterinary Bacteriological Institute, University of Berne, Switzerland

In September 1992, the first case of rabies in a Swiss bat was diagnosed by the Swiss Rabies Centre. The bat, a Myotis daubentoni, had been found on a sunny afternoon, hanging on the grid of a ventilation shaft of a house in "Schwarzsee", community of Plaffeien, canton of Fribourg. When someone tried to take the bat from the grid, it escaped and fluttered to the ground, from where it could be picked up. The animal tried to bite, however it was already too weak to puncture the skin of the person who had taken it. It died within a short time. The person who had handled the animal received full postexposure treatment.

The brain of the bat was only weakly positive for rabies in the FAT, using a polyclonal antiserum, but was clearly positive when an indirect immunofluorescence test was done with monoclonal antibodies. Suckling mice, inoculated intracerebrally with 20% brain suspension, died on days 10 to 12. Using MABs, the virus strain could be identified as European Bat Lyssavirus (EBL).

This is the fifth case found in a Myotis daubentoni

in Europe. Earlier cases had been reported from the former USSR (1981; see Rabies Bulletin Europe 14 [1]), Denmark (1986, 1987; RBE 10 [3], 11 [4]), and Germany (1986; RBE 10 [3]. Since 1985, we have examined 380 bats of 16 species, including 11 Eptesicus serotinus and 18 Myotis daubentoni. The animals came from almost all parts of the country. However, there have neither been examined any bats from the region of "Schwarzsee" before, nor after this first case, at least not up to now.

Some 31 species of bats are known to live in Europe, 26 of them have been recorded in Switzerland. Most species must be considered as seriously endangered species some are even on the verge of extinction. The appearence of rabies in a bat population may provoke adverse reactions from the general public resulting in the destruction of individual bats, bat colonies or roosting sites. We discussed these problems with the two bat protection societies working in Switzerland already several years ago. With their collaboration, several variants of press releas

es were prepared in spring 1990 - two and a half years before the first case - which should cover different scenarios of a possible first case of bat rabies. Besides the information on the case itself, emphasis was put on conservation issues. The documents had circulated and were approved by all bat specialists, and were also discussed with professional journalists. At the same time we established a database containing the addresses of contacts that should be notified of a first case: public health, veterinary, hunting, and conservation authorities on federal and cantonal level, bat specialists, and various other institutions.

When the first bat case was diagnosed, the press release was finalized and mailed to the contacts mentioned above, together with background information. All potential interlocutors of journalists had already been informed when the information was given to the press the following day. In general, press articles were objective, correct, and far from sensationlist. We felt that the careful preparation well in advance of the first case of bat rabies had paid off.

4.3 Oral Vaccination of Foxes in Europe, 1992

by Winfried W. Müller
WHO Collaborating Centre for Rabies Surveillance and Research,
at the Federal Research Centre for Virus Diseases of Animals, Tuebingen, Germany

This is the seventh annual reporting in this BUL-LETIN on the development of rabies in areas where oral vaccination of foxes is practiced in Europe.

Former reports were supplemented by a map indicating areas once or several times vaccinated and areas newly vaccinated. At this point it can be said: all countries, practicing oral vaccination, except for Hungary have vaccinated in 1992 their entire infected areas at least once.

They have followed a certain strategy when started and, usually increased the number of vaccine baits to be distributed in further campaigns.

At the time of writing this article Hungary has started with oral vaccination. For the first time a 25 to 50 km wide belt (about 5000 km²) was

vaccinated along the Austrian border using "Fuchsoral" (SAD B19) vaccine baits. A gradual expansion eastward in the country is intended.

To review oral vaccination in 1992 a table has been produced: with rabies data of 1977 when the European rabies surveillance started, with data of 1991 and 1992 (first to third quarters), with the annual maximum of cases and with the year when oral vaccination was started (TABLE 1).

Oral vaccination is a powerful tool, and for the first time rabies has been eradicated in large areas of Europe. Nevertheless, several countries had the experience of being reinvaded by the disease (not just in 1992), some even more than once. When areas were infected having a totally unprotected high fox population, fierce outbreaks developed.

Natural borders expected to stop the disease from spreading did not always protect a country. There were no doubt other reasons causing set-backs, like restricted budgets so that large areas could not be vaccinated, technical failures, etc.

Referring to TABLE 1, there are four countries (BEL, ITA, SVN, SWI) which can be expected to register more rabies cases in 1992 than in 1991. Nevertheless, the overall development of rabies in Europe in 1992 is very advantageous for the countries practicing oral vaccination (they registered 7 667 cases during the first three quarters 1991 compared to 3 946 cases in 1992) and, setbacks may very well lead to setting up more safety-belts along borders or establishing closer border cooperation of countries, to move even faster to the goal of eradicating the disease.

TABLE 1
Rabies development in countries practicing oral vaccination of foxes 1992

Countries	Cases 1977	Max. Cases (Year)	Cases 1991	Quarters 1-3/92	Start of Oral Vaccination
AUT	3058	4044 (1978)	2460	991	1986
BEL	68	842 (1989)	29	31	1986
CZE 1)	428	2106 (1984)	1097	413	1989
DEU ²⁾	6738	9162 (1983) ³⁾	3596	1113	1983
					1989 ⁴⁾
FIN	-	63 (1988)	1 55 0	2.5	1988
FRA	1668	4214 (1989)	2166	1100	1986
HUN					1992 5)
ITA	97	448 (1983)	4	21	1984
LUX	34	205 (1982)	16	1	1986
NET 2)	2	65 (1984)	-3	8=	1988
SVN	10	805 (1988)	188	176	1988
SWI ²⁾	1041	1413 (1981)	105	100	1978

¹⁾ Czech Republic only

²⁾ Bat rabies cases not considered

³⁾ Cases of Federal and former Democratic Republics added

⁴⁾ Start of oral vaccination in former Democratic Republic

⁵⁾ Not to be evaluated yet

EUR EUROPE	3/92	2		i	RABI	ES	CASE	S					1. 7.	92 - 30	. 9.92
LOCATION		DОM	EST:	I C A	NIM	ALS			WIL	_ D A	NIM	ALS			
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
ALB ALBANIA ** AUT AUSTRIA BEL BELGIUM BUL BULGARIA ** BYE BELARUS **	-	2	6	1	=	-	0 9 0 0	91 1	3	7 -	12	-	0 113 1 0		0 122 1 0
CRO CROATIA CZE CZECHOSLOVAKIA DEN DENMARK *	1 3	3 10	- 1	Ē	-	=	4 14 0	22 99	-	1 6	-	-	23 105 0		27 119 0
DEU FED.REP. OF GERMANY EST ESTONIA FIN FINLAND *	6	12	15 3	2	12	=	47 5 0	232 7	8 -	9	13	1 8	263 16 0		310 21 0
FRA FRANCE GRE GREECE * HUN HUNGARY	4	7 21	5 8	1	6 2	-	21 0 36	152 151	-	6	1	1	165 0 154		186 0 190
ICE ICELAND * IRE IRELAND * ITA ITALY LTU LITHUANIA	3	5	12	_	_	_	0 0 20	4 2	-	- 1	2	-	0 0 6 3		0 0 6 23
LUX LUXEMBOURG * LVA LATVIA MLD MOLDOVA **	5	5	1	=	-	-	0 11 0	13	1	1	-	6	0 21 0		0 32 0
NET NETHERLANDS NOR NORWAY * POL POLAND	12	38	81	-	1	1	0 0 133	532	10	24	26	5 51	5 0 643		5 0 776
POR PORTUGAL * ROM ROMANIA RUS RUSSIAN FEDERATION SPA SPAIN 1)	1 20 1	1 13	1 77	- 2	-	1	0 3 113 1	5 21	-	- 2	-	2	0 7 26	2	10 141 1
SVN SLOVENIA SWE SWEDEN * SWI SWITZERLAND + LIECHT	2	1	1	=	-	-	4 0	36 17	- 2	3 -	-	- 1	39 0 20		43 0 20
TUR TURKEY UKR UKRAINE ** UNK UNITED KINGDOM *	47	5	9	1	2	1	65 0 0	_	1	-	-	1	0 0		67 0 0
YUG YUGOSLAVIA	5	2	-	-	-	-	4	15	-	-	-	-	15	_	19
PER CENT	110 5.2	126 5.9	10.4	0.4	1.1	0.1	490	1400	1.3	2.9	2.8	3.8	1627 76.8	0.1	2119

^{*} NO CASES ** NO DATA 1) NORTH AFRICA

EUR EUROPE	1-3/	92		1	RABI	ES (CASE	s					1. 1.	92 - 30	.09.92
LOCATION		о о м	EST:	I C A	NIM	ALS			WIL	- D A	NIM	ALS		124 200 500 60 80 30 40 1	Turrency on
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
ALB ALBANIA **							0						0		0
AUT AUSTRIA	2	12	16	2	13	-	45	812	53	39	42	_	946		991
BEL BELGIUM	-	-	7	1	8	-	16	15	-	-	-	-	15	i	31
BUL BULGARIA **		1					0				1		0	l	0
BYE BELARUS **						1	0						0		0
CRO CROATIA	5	7	2	-	-	-	14	93		1	1	2	97		111
CZE CZECHOSLOVAKIA	12	29	1	-	-	-	42	571	8	15	3	1	598		640
DEN DENMARK *		l			1		0						0	1	0
DEU FED.REP. OF GERMANY	56	53	34	6	36	1	186	822	16	43	44	5	930	1	1116
EST ESTONIA	12	7	4	-	_	-	23	19	2	-	1	25	47		70
FIN FINLAND *							0						0		0
FRA FRANCE 1)	24	36	34	19	41	2	156	894	13	25	9	2	943	1	1100
GRE GREECE *						1	0					1	0	1	0
HUN HUNGARY	36	54	17	2	- 5	-	114	415	-	5	1	2	423		537
ICE ICELAND *			1				0						0		0
IRE IRELAND *							0	1					0	1	0
ITA ITALY							0	18	1	-	2	-	21		21
LTU LITHUANIA	14	10	18	-	1	1	44	5	_	3	-	-	8	1	52
LUX LUXEMBOURG	3-7	-	1	-	-	-	1				l		0	1	1
LVA LATVIA	17	16	4	-			37	35	2	4	-	55	63	1	100
MLD MOLDOVA **		1		ł			0					1	0		0
NET NETHERLANDS			1				0	_	-	-	-	7	7	1	7
NOR NORWAY 2)	and the same of	0.0000000000000000000000000000000000000	000000000				0	_	_	_	-	1	1		1
POL POLAND	71	107	107	3	1	3	292	1227	18	53	67	131	1496		1788
POR PORTUGAL *		_					0	702 703				1	0		0
ROM ROMANIA	8	5	4	-	7	1	25	14	-	-	-	2	16		41
RUS RUSSIAN FEDERATION	119	36	276	10	142	3	586	70	-	3	-	8	81	5	672
SPA SPAIN 3)	10	_		-	-	-	10	77.50			l		0	1	10
SVN SLOVENIA	7	2	1	-	-	_	10	142	8	10	5	1	166	1	176
SWE SWEDEN *		_					0				5/21	520	0		0
SWI SWITZERLAND + LIECHT	-	2		-	_	-	2	87	10	-	1	1	99		101
TUR TURKEY	186	8	30	2	6	4	236	-	2	-	-	1	3		239
UKR UKRAINE **							0						0		0
UNK UNITED KINGDOM *	5	-			-	_	0	40	3700-	1,71101			0		0
YUG YUGOSLAVIA	5	5	1	_	7		18	49			1	-	50		68
TOTAL	584	389	557	45	267	15	1857	5288	133	201	177	211	6010	6	7873

* NO CASES ** NO DATA 1) HUMAN CASE IMPORTED FROM ALGERIA 2) ISLAND OF SVALBARD 3) NORTH AFRICA

3.4

0.2

23.6

67.2

1.7

2.2

2.6

2.7

76.3

0.1 100.0

0.6

7.4

4.9

7.1

PER CENT

TABLE 3

EUR EUROPE	3/92			R A B	I E S R ANIM		S E S CIES'				1.	7.92 - 30	0. 9.92		
LOCATION	OTHER D	OMESTIC	ANIMALS		OTHER WILD ANIMALS										
	OTH.DOM. CARNIVO	DONKEY	OTHERS	RACCOON DOG	WILD	WILD BOAR	HEDGEHOG	INSECTIV. BAT	SQUIRREL	BLACK	HOUSE	OTHERS	TOTAL		
DEU FED.REP. OF GERMANY	-	-	-	-		-	_	1	-	1=0	-	-	1		
EST ESTONIA	-	-	-	8	-	-	-	1-1	-	-	-	-	8		
FRA FRANCE	-	-	-	-	-	1	-	-	_	-	-	-	1		
HUN HUNGARY	-	-	-		1	-	-	_	-	_	-	-	1		
LVA LATVIA	-	-	1-1	6	-	-	-	-	-	-	-	-	6		
NET NETHERLANDS	-	-	-	=	-	-	-	5	-	-	-	-	5		
POL POLAND	1	-	-	49	-	-	1	-	1	-	-	-	52		
ROM ROMANIA	-	-	-	-	-	-	-	-	-	-	1-	2	2		
RUS RUSSIAN FEDERATION	-	-	1	1	-	-	-	_	-	2	-	-	4		
SWI SWITZERLAND + LIECHT	-	-	-	-	-	-	-	1	-	-	_	_	1		
TUR TURKEY	-	1	_	-	-	_	-	-	_	_	1	_	2		
TOTAL	1	1	1	64	1	1	1	7	1	2	1	2	83		
PER CENT	1.2	1.2	1.2	77.1	1.2	1.2	1.2	8.4	1.2	2.4	1.2	2.4	100.0		

AUT AUSTRIA				ı	RABI	ES (CASE	s					1. 7.	92 - 30	. 9.92
LOCATION		D O M	EST	I C A	NIM	ALS		WILD ANIMALS							
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
108 OBERPULLENDORF 306 BADEN 310 HOLLABRUNN	-	-	1	-	-	-	0 1 0	1 19 1	1	-	3	-	1 23 1		1 24
312 KORNEUBURG 314 LILIENFELD 316 MISTELBACH	-	1	-	-	-	-	1 0	1 - 2	-	1	_ _ _	=	2 1 3		3 1 3
317 MOEDLING 318 NEUNKIRCHEN 319 SANKT POELTEN-LAND	-	-	2	-	٠	-	0 2	11	_	1 -	1	-	13 0 2		13 2
320 SCHEIBBS 322 WAIDHOFEN AN DER THA 323 WIENER NEUSTADT-LAND	_	1	_	_	_	_	0	4 5	-	-	-	-	4 5 0		5
324 WIEN-LAND 406 FREISTADT 411 PERG		-			75		0 0	1 1	-	- - 1	- - 1	=	1 1 3		1 1 3
502 HALLEIN 503 SALZBURG-LAND 602 BRUCK AN DER MUR							0 0	3	1 -	- - 1	1 -	-	3		3
703 INNSBRUCK-LAND 706 LANDECK 801 BLUDENZ					_	_	0 0	13 1 8	- - 1	- 2	3 - 1	=	16 1		16 1
801 BLUDENZ 802 BREGENZ 901 WIEN	-	=	2	1 -	_	=	2 0	11 4	-	-	1 -	=	12		14
TOTAL	0	2	6	1	0	0	9	91	3	7	12	0	113	0	122
PER CENT	0.0	1.6	4.9	0.8	0.0	0.0	7.4	74.6	2.5	5.7	9.8	0.0	92.6	0.0	100.0

LOCATION		D 0 M	EST:	I C A	NIM	ALS		WILD ANIMALS							
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	HUMAN	TOTAL
BEL BELGIUM					P)										
LX LUXEMBOURG							0	1	-	-	-	-	1		1
TOTAL	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
014 DELNICE 017 DONJI MIHOLJAC 020 DUGA RESA 034 JASTREBARSKO 036 KARLOVAC 044 KRIZEVCI 055 NOVSKA 060 ORAHOVICA 077 SISAK 086 VALPOVO	- 1	1	-	-	-	-	0 0 1 0 0 1 0 1 0	2 1 1 1 1 1 1			-	-	2 1 0 2 1 1 1 0 0 1 1 1 1 1		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
088 VINKOVCI 098 ZADAR 100 ZLATAR BISTRICA 102 GRAD ZAGREB	-	1	-	-	-	-	1 0 0	2 1 1 8	-	1 - -	-	-	3 1 1 8		1 1 6
TOTAL PER CENT	1 3.7	3	0.0	0.0	0.0	0.0	4	22 81.5	0.0	1 3.7	0.0	0.0	23 85.2	0.0	100.0

CZE сzесноs L	0 V A F	(IA			RABI	ES (CASE	s					1. 7.	92 - 30	. 9.92
LOCATION		DOMESTIC ANIMALS W							WI	L D A	NIM	ALS			TOTAL
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
00 DISTRICT OF PRAGUE 01 CENTRAL BOHEMIA 02 SOUTH BOHEMIA 03 WEST BOHEMIA 04 NORTH BOHEMIA 05 EAST BOHEMIA 06 SOUTH MORAVIA 07 NORTH MORAVIA	- - 1	3 1 -	-	-		-	0 0 3 0 0 1 1	1 9 3 1 12 17 12 4		1 2 -	1111111		1 9 3 1 12 18 14 4		1 9 6 1 12 19 15
O CZECH REPUBLIC	1	4	-	-	-	_	5	59	-	3	-	-	62		67
10 DISTRICT OF BRATISLAV 11 WEST SLOVAKIA 12 CENTRAL SLOVAKIA 13 EAST SLOVAKIA	- - 2	1 1 4	- - 1	=	=	=	0 1 1 7	17 7 16	=	1 1 1	1111	-	0 18 8 17		0 19 9 24
1 SLOVAK REPUBLIC	2	6	1	-	-	-	9	40	-	3	-	-	43		52
TOTAL	3	10	1	0	0	0	14	99	0	6	0	0	105	0	119
PER CENT	2.5	8.4	0.8	0.0	0.0	0.0	11.8	83.2	0.0	5.0	0.0	0.0	88.2	0.0	100.0

page 20

DEU FEDERAL REPUBLI	C OF GE	RMANY			RABI	ES	CASE	S					1. 7.	92 - 30	. 9.92
LOCATION		DOM	EST	I C A	NIM	ALS			WI	L D A	NIM	ALS		HUMAN	TOTAL
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
010 SCHLESWIG-HOLSTEIN 020 HAMBURG 031 BRAUNSCHWEIG 032 HANNOVER 033 LUENEBURG 034 WESER-EMS 040 BREMEN 051 DUESSELDORF 053 KOELN 055 MUENSTER 057 DETMOLD 059 ARNSBERG 064 DARMSTADT 065 GIESSEN 066 KASSEL 071 KOBLENZ 072 TRIER 073 RHEINHESSEN-PFALZ 081 STUTTGART 082 KARLSRUHE 083 FREIBURG 084 TUEBINGEN 091 OBERBAYERN 092 NIEDERBAYERN 093 OBERPFALZ		1 1	2 1 1 5 2 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 -		0021100000000000000055200	3 2 16 1 13 2 19 48 21 7	1 2	2 - 1 2	1 6 1	1	0 0 6 2 18 0 0 0 0 0 0 0 0 0 16 2 3 3 19 56 22 7 0 0		0 0 0 8 3 19 0 0 0 0 0 0 0 2 0 0 18 2 4 3 19 71 27 9 71 27 9 9

DEU CONTINUED															
LOCATION		D О М	EST:	I C A	NIM	ALS			WIL	_ D A	NIM	ALS			
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
094 OBERFRANKEN							0	120					0		0
095 MITTELFRANKEN		- 20			1		0	1	_	- 1	-	_	1		1
096 UNTERFRANKEN	-	1	-	-	_	-	1	18	-	_	1	_	19		20
097 SCHWABEN	1				i		0	12	1	2	-	-	15		15
100 SAARLAND	1						0	4	1	- 1	i -	_	5		5
110 BERLIN	-	1	_	-		-	1						0	1	1
121 POTSDAM	1			1			0	7	-	- 1	-	-	7		7
122 FRANKFURT	-	2	-	-	-	-	2	5	-	- 1	_	-	5		7
123 COTTBUS	1					1	0	1	-	-	-	-	1		1
131 ROSTOCK	1						0	5	-	-	1	-	6		6
132 SCHWERIN	1			l	1		0						0		0
133 NEUBRANDENBURG	3	-	-	-	-	-	3	9	-	1	_	-	10		13
141 DRESDEN	1					1	0	4	-	-	-	-	4		4
142 LEIPZIG	1						0						0	1	0
143 CHEMNITZ							0						0		0
151 MAGDEBURG	1	2	2	2	-	-	7	20	1	-	-	-	21	1	28
152 HALLE	1	1	-	-	1	-	3	11	-	1	1	-	13		16
161 ERFURT	-	1	-	-	-	-	1		1				0		1
162 GERA							0						0		0
163 SUHL							0						0		0
TOTAL	6	12	15	2	12	0	47	232	8	9	13	1	263	0	310
PER CENT	1.9	3.9	4.8	0.6	3.9	0.0	15.2	74.8	2.6	2.9	4.2	0.3	84.8	0.0	100.0

LOCATION		DOM	EST:	I C A	NIM	ALS			WI	L D A	NIM	ALS			
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	HUMAN	TOTAL
HALJ Haljala							0	-	-	-	-	1	1		1
JĀRV Jārva-Jaan	-	-	1	-	-	-	1	1	1	1 1			0		1
MOOS Moosler	-	_	1	_	_	-	1		1	1 1			0	1	1
OLUS Olustvere							0	-	-	-	-	1	1		1
PEET Peetri							0	1	1-0	-	-	-	1		1
PUUR Puurmani	-	1	-	-	-	-	1		1	1 1			0	1	1
PÕLV Põlvla					1		0	1	-	-	-	-	1	1	1
RAKK Rakke					1		0	1	-		_	-	1	1	1
SANG Sangaste	-	-	1	-	-	-	1						0	1	1
TAMS Tamsalu					1	1	0	1	1-	-	-	-	1		1
TARV Tarvastu					1	1	0	1	1-1	-	-	1	2		2
TÕRV Tõrva	1	-	-	-	-	-	1		1				0		1
VARS Varstu							0	1	-	-	-	-	1		1
VILJ Viljandi Linn						1	0	-	_	- 1	1	1	2	1	2
VIRU Viru-Nigula						1	0	1		- 1	-	1	2	1	2
VODJ Vodja	1				1		0	-	-	-	-	2	2	1	2
VĀND Vāndra							0	-	_	-	-	1	1		1
TOTAL	1	1	3	0	0	0	5	7	0	0	1	8	16	0	21
PER CENT	4.8	4.8	14.3	0.0	0.0	0.0	23.8	33.3	0.0	0.0	4.8	38.1	76.2	0.0	100.0

FRA FRANCE				,	RABI	ES (CASE	S					1. 7.	92 - 30	. 9.92
LOCATION		DOM	EST	I C A	NIM	ALS			WI	_ D A	NIM	ALS			
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
02 AISNE							0	2	-	-	_	-	2		2
10 AUBE			1			1	0	8	-	-	1-1	-	8		8
21 COTE D'OR	1		1				0	6	-	-	-	-	6		6
25 DOUBS	-	-	-	1-	1	-	1	3	-	-	-	1 -	3	1	4
51 MARNE	-	1	-	-	-	-	1	3	-	-	-	-	3		4
52 MARNE (HAUTE)	-	-	1	1	-	-	2	27	-	-	-	-	27		29
54 MEURTHE ET MOSELLE	-	1	1	-	2	-	4	12	-	2	-	-	14		18
55 MEUSE	-	-	-	-	1	-	1	9	-	-	1	-	10	1	11
57 MOSELLE	1	-	1	-	-	1-1	2	13	-	-	-	-	13		15
67 RHIN (BAS)	1 -	2	-	-	1	-	3	5	-	-	-	-	5		8
68 RHIN (HAUT)	-	1	1	-	1	-	3	19	2	3	3	-	27		30
70 SAONE (HAUTE)	1	1	1	-	-	-	3	16	-	-	-	-	16		19
76 SEINE MARITIME					1		0	4	-	-	-	-	4		4
80 SOMME	1						0	1	-	-	-	-	1		1
88 VOSGES	-	1	-	-	1 -		1	15	1 - 1	1	-	1	17	1	18
90 TERR.DE BELFORT							0	9	-	-	-	-	9		9
TOTAL	2	7	5	1	6	0	21	152	2	6	4	1	165	0	186
PER CENT	1.1	3.8	2.7	0.5	3.2	0.0	11.3	81.7	1.1	3.2	2.2	0.5	88.7	0.0	100.0

LOCATION		D 0 M	EST	C A	NIM	ALS			WI	_ D A	NIM	ALS			
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
01 BUDAPEST							0	1	_	_	-	_	1		1
02 BARANYA	-	3	-	i —	1	-	4	9		- 1	-	-	9	1	13
03 BACS-KISKUN	-	1	1	-	-	-	2	7	_	_	-	_	7	1	9
04 BEKES	-	1	-	-	-	-	1		1				0	1	1
05 BORSOD-ABAUJ-ZEMPLEN	_	1	-	-	-	-	1	13	-	-	_	1	14	1	15
06 CSONGRAD	-	1	2	-	1	-	4	15	-	-	-	-	15	1	19
07 FEJER	1	2	2	-	-		5	15	1 -	1	-		15		20
OB GYOER-SOPRON					1	1	0	1	-	-	-	-	1		1
09 HAJDU-BIHAR	-	2	-	-	-	_	2	5	=	-	-	-	5	1	7
11 KOMAROM	-	2	-	-	-	-	2	7	-	-	-	-	7		9
12 NOGRAD	-	1	-	-	-	i -	1	3	-		-	-	3		4
13 PEST			1		1		0	6	-	-	-		6	1	6
14 SOMOGY	1	1	1	-	-	-	3	19	-	-	-	-	19	1	22
15 SZABOLCS-SZATMAR	-	2	1	-	-	-	3					1	0	1	3
16 SZOLNOK					1		0	3	-	-	-	-	3	1	3
17 TOLNA	1	2	1	-	-	-	4	5	-	-	_	_	5	1	9
18 VAS	-	1	-	-	-	-	1	23	-	-	1	-	24	1	25
19 VESZPREM	1	-	-	-	-	-	1	8	-	-	-	-	8	1	9
20 ZALA	-	1	_	1	-	-	2	11	-	1	-	-	12		14
TOTAL	4	21	8	1	2	0	36	151	0	1	1	1	154	0	190
PER CENT	2.1	11.1	4.2	0.5	1.1	0.0	18.9	79.5	0.0	0.5	0.5	0.5	81.1	0.0	100.0

				-	RABI	ES (CASE	s					1. 7.	92 - 30	. 9.92
LOCATION		DOM	EST:	I C A	NIM	ALS			WII	_ D A	NIM	ALS			
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
ITA ITALY															
33 UDINE 34 TRIESTE E GORIZIA							0	2	=	-	2	=	4 2		4 2
TOTAL	0	0	0	0	0	0	0	4	0	0	2	0	6	0	6
34 Anyksciu 39 Vilkaviskio 41 Viniaus 47 Jonisko 49 Kaisiadoriu 55 Klaipedos 57 Kubiskio 62 Moletu 66 Panevezio 68 Plunges 71 Radviliskio 78 Telsiu 82 Utenos	1 1 1	1 1 1 1 1 1 1	1 - 4 - 3 - 2 -	-	-	-	2020111413131	1	-	-	-	-	0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		2121111413131
94 Jurbarko							ō	-	-	1	_	-	1		1
TOTAL	3	5	12	0	0	0	20	2	0	1	0	0	3	0	23
PER CENT	13.0	21.7	52.2	0.0	0.0	0.0	87.0	8.7	0.0	4.3	0.0	0.0	13.0	0.0	100.0

LOCATION		DOM	EST:	C A	NIM	ALS			WI	LD A	NIM	ALS			
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
01 Aizkraukle							0	2	-	-	_	-	2		2
02 Aluksne	1 1						0	-	-	- 1	_	1	1	1	1
06 Daugavpils	-	1	_	_	-	-	1						0	1	1
08 Gulbene							0	1	-	-	-	-	1		1
09 Jekabpils	1	-	-	-	-	-	1	-	1	1-	-	-	1		2
11 Kraslava	1	-	-	-	-	-	1	1					0		1
13 Liepaja	-	1	-	-	-	-	1	1	-	-	-	1	2	1	3
14 Limbazi							0	1	-	-	-	-	1		1
15 Ludza	-	1	-	-	-	1-	1						0	1	1
16 Madona	1	-	1	-	-	-	2	ì	1				0	1	2
17 Ogre					1		0	6	-	1	-	3	10	1	10
18 Preili	1 1				1		0	1	-	-	-	_	1	1	1
19 Rezekne	-	1	-	-	-	-	1		1			1	0		1 1
20 Riga							0	-	_	-	-	1	1	ł	1
21 Saldus	1	1	-	-	-	_	2		1				0	1	2
22 Talsi	1	-		-	-	1-	1	l .	1			1	0	1	1
23 Tukums							0	1	-	-	-	-	1		1
TOTAL	5	5	1	0	0	0	11	13	1	1	0	6	21	0	32
PER CENT	15.6	15.6	3.1	0.0	0.0	0.0	34.4	40.6	3.1	3.1	0.0	18.8	65.6	0.0	100.0

LOCATION		D O M	EST	I C A	NIM	ALS			WI	_ D A	NIM	ALS			
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	HUMAN	TOTA
NET NETHERLA	NDS														
01 DRENTHE 03 GELDERLAND 07 NOORD-HOLLAND 10 ZUID-HOLLAND					£		0 0 0	=	=	111	=	1 1 1 2	1 1 1 2		
TOTAL	0	0	0	0	0	0	0	0	0	0	0	5	5	0	
ROM ROMANIA	7.00							·							
01 ALBA 04 BACAU 16 DIMBOVITA 17 DOLJ 20 GORJ	- - 1	1 - -	1 -	-	-	-	1 0 0 1 1	1 2	=	-	=	2 -	0 3 2 0 2		
TOTAL	1	1	1	0	0	0	3	5	0	0	0	2	7	0	

POL POLAND					RABI	ES	CASE	S					1. 7.	92 - 30	. 9.92
LOCATION		р о м	EST:	I C A	NIM	ALS			WIL	L D A	NIM	ALS			
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
01 WARSZAWA 03 BIALA PODLASKA 05 BIALYSTOK	1 1	2	- 5	-	-	-	2 0 5	5 3 6	-	1 - -	111	- - 2	6 3 8		8 3 13
07 BIELSKO-BIALA 09 BYDGOSZCZ 11 CHELM	-	-	6	-	-	-	0 6 0	1 25 -	=	- 2 1	-	7 -	1 34 1		1 40 1
13 CIECHANOW 15 CZESTOCHOWA 17 ELBLAG 19 GDANSK	1 1	1 2	2 7 13	=	-	1	0 4 11 14	19 14 25		1 - 2	2	- 4 5	5 20 18 34		5 24 29 48
21 GORZOW 23 JELENIA GORA 25 KALISZ	1 -	3	1 -	-	-	-	0 3	24 16 15	-	2	. 1	1 -	29 18 15		31 18 18
27 KATOWICE 29 KIELCE 31 KONIN	1 1 1	=	1 1	=	1 - -	=	5 5	2 13	=	3 - -	-	1 - -	6 2 13		8 4 15
33 KOSZALIN 35 KRAKOW 37 KROSNO	-	-	1	-	-	-	8 0 1	28 1 4	1 - -	=	7 - -	2 - -	38 1 4		46 1 5
39 LEGNICA 41 LESZNO 43 LUBLIN 45 LOMZA	_ _ 1	-	1 1	=	=	-	1 0	15 11 1	-	-	1 -	1	15 12 2 3		17 13 2
47 LODZ 49 NOWY SACZ	-	1		=	=	=	1 0	2	_	-	-	_	0 2		1 2

POL CONTINUED															
LOCATION		DOM	EST	I C A	NIM	ALS			WII	_ D A	NIM	ALS			
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
51 OLSZTYN	-	2	2	-	-	-	4	2	2	-	-	2	6		10
53 OPOLE	-	3	1	-	-	-	4	15	-	2	-	-	17	1	21
55 OSTROLEKA					1		0	5	-	-	-	-	5	1	5
57 PILA	1				1		0	11	_	1	-	3	15	1	15
61 PLOCK					1		0	-	-	-	-	1	1	1	1
63 POZNAN	1	6	6	-	-	-	13	54	1	2	4	1	62	1	75
65 PRZEMYSL							0	10	2	- 1	-	-	12		12
69 RZESZOW	1	3	_	-	-	-	4	4	-	-	-	-	4	1	8
71 SIEDLCE	-	1	-	-	_	-	1	12	1	2	1	-	16	1	17
73 SIERADZ							0	3	1-1	-	-	-	3	1	3
75 SKIERNIEWICE					1		0	1	-	-	-	-	1	1	1
77 SLUPSK	-	-	2	- 1	-	-	2	17	-	-	3	5	25	1	27
79 SUWALKI	2	1	14	-	-	-	17	3	-	1	-	4	8	1	25
81 SZCZECIN	-	-	3	-	-	-	3	29	2	-	2	8	41	1	44
83 TARNOBRZEG	-	1	-	-	-	-	1	1	-	1-	-	-	1	1	2
85 TARNOW	1				1	1	0	-	-	-	1	-	1	1	1
87 TORUN	1-	-	3	-	-	-	3	2	-	-		1	3	1	6
89 WALBRZYCH	-	1	5	-	-	-	6	23	-	3	-	-	26	1	32
93 WROCLAW	-	3	-	-	_	-	3	58	-	- 1	1	-	59	1	62
95 ZAMOSC	-	1	-	-	_	-	1	1	-	-	-	-	1		2
97 ZIELONA GORA	1	1	2	-	-	-	4	42	-	1	2	1	46		50
TOTAL	12	38	81	0	1	1	133	532	10	24	26	51	643	0	776
PER CENT	1.5	4.9	10.4	0.0	0.1	0.1	17.1	68.6	1.3	3.1	3.4	6.6	82.9	0.0	100.0

LOCATION		D O M	EST:	I C A	NIM	ALS			WIL	_ D A	NIM	ALS			
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
08 Pskov Region	1	-	1		_	_	2	1	_	_		-	1		3
09 Bryansk Region	1	1	-	_	3-3	_	2		1				0	1	2
12 Twer Region	2	-	-	-	7-2	-	2		1				0	1	2
13 Kaluga Region	-	1	-	1	-	-	2	2	-		-	-	2		4
15 Moscow Region	1	_	-	_	-	1	2	1	-		-	l -	1		3
16 Oryol Region	-	1	2	-	-	-	3	-	_		_	1	1		4
18 Smolensk Region							0	1	_	-	_	-	1		1
19 Tula Region	3	2	1		* =	-	6	1	-	1-1	_	-	1	1	8
26 Belgorod Region	2	1	1	_	_	-	4						0		4
27 Voronezh Region	1	-	-	. —	-	-	1	1	-	1-0	_	-	1	1	2
28 Kursk Region	2	3	12	_	_	_	17	2	-	1	-	-	3		20
31 Astrakhan Region	1-1	1	_	-	-	-	1						0	1	1
32 Volgograd Region	-	-	2		-	-	2						0		2
33 Samara Region	1	_	7	· ·	1-1	_	8	3	-		-	_	3		11
34 Penza Region	2	-	1	_	-	-	3	5	_	1	-	-	6		9
35 Saratov Region	_	3	16	-	_	-	19		1				0	1	19
38 Republic of Tatarstan		-	8	-	-	-	8		1				0		В
40 Stavropol Territory	1	-	-	_	-	-	1	-	-	-	_	1	1	1	2
41 Rostov Region							0	1	-	-	-	_	1	1	2
42 Orenburg Region	3	-	5	-	-	-	8	3	-		-	-	3		11
43 Perm Region							0	_	-	-	-	1	1		1
44 Republic of Bashkorto	-	-	20	1	-	_	21						0	1	21
46 Kaliningrad Region	-	_	1		-	-	1						0		1
TOTAL	20	13	77	2	0	1	113	21	0	2	0	3	26	2	141
PER CENT	14.2	9.2	54.6	1.4	0.0	0.7	80.1	14.9	0.0	1.4	0.0	2.1	18.4	1.4	100.0

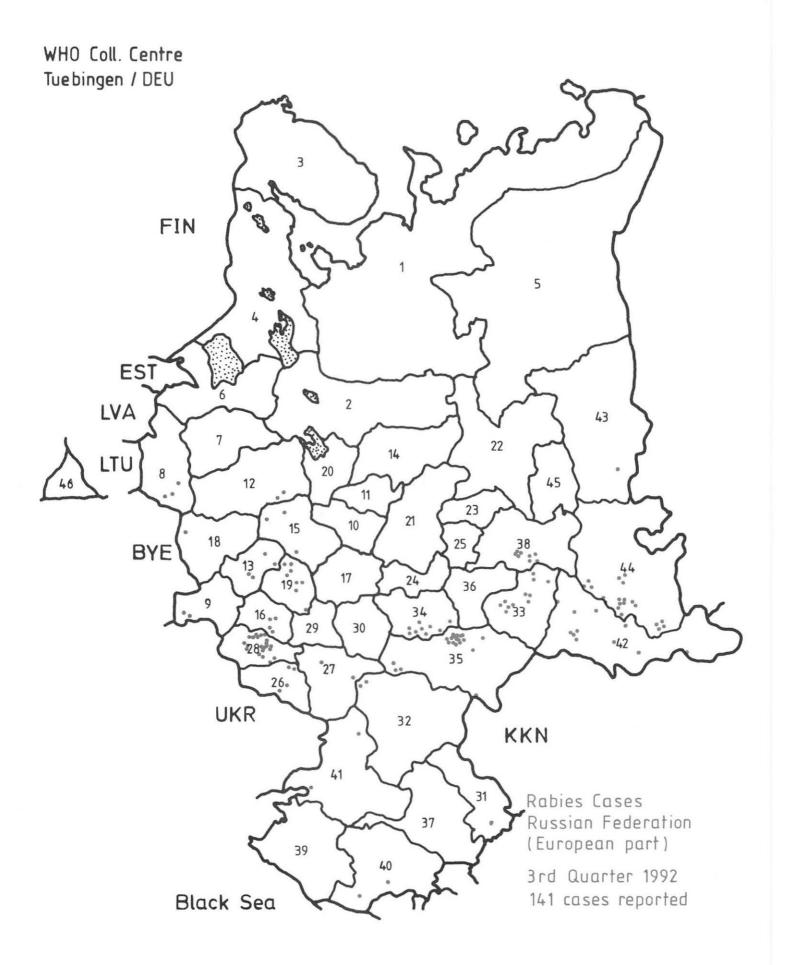
					RABI	ES (CASE	s					1. 7.	92 - 30	. 9.92
LOCATION		о о м	EST	I C A	NIM	ALS			WI	_ D A	NIM	ALS		HUMAN	TOTAL
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	TOTAL
SPA SPAIN															
52 MELILLA (NORTH AFRICA	1	-	-	-	-	_	1						0		1
SWI SWITZERLAND AND	LIECHTE	ENSTEIN													
04 BASEL-STADT 05 BASEL-LAND 06 BERN 07 FRIBOURG 17 SOLOTHURN 26 JURA			a.				0 0 0 0	1 4 2 - 8 2	5 -	-	-	1 -	1 4 2 1 10 2		10
TOTAL	0	0	0	0	0	0	0	17	2	0	0	1	20	0	20
PER CENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.0	10.0	0.0	0.0	5.0	100.0	0.0	100.0
YUG YUGOSLAV	IA					~			~				26.2		
61 SAP VOJVODINA	2	2	_	_	_	_	4	15	_	_	_	_	15	1	19

SVN SLOVENIA					RABI	ES (CASE	S					1. 7.	92 - 30	. 9.92
LOCATION	DOMESTIC ANIMALS						WILD ANIMALS								
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES TOTA	TUTAL
01 AJDOYSCINA 03 CELJE 04 CERKNICA 09 GROSUPLJE 11 IDRIJA 15 KAMNIK 16 KOCEVJE 23 LITIJA 28 LJUBLJANA VIC RUDNIK 29 LJUTOMER 30 LOGATEC 37 NOVA GORICA 41 POSTOJNA 42 PTUJ 45 RAVNE NA KOROSKEM 46 RIBNICA 48 SEZANA 51 SLOVENSKE KONJICE 53 SKOFJA LOKA 55 TOLMIN 57 TREBNJE 59 VELENJE 60 VRHNIKA	1 -	1	- 1	-	-	-	000001000000000000000000000000000000000	11211 1-2 225131411123		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1121201120226131411123		1121211212262315111123
TOTAL	2	1	1	0	0	0	4	36	0	3	0	0	39	0	43
PER CENT	4.7	2.3	2.3	0.0	0.0	0.0	9.3	83.7	0.0	7.0	0.0	0.0	90.7	0.0	100.0

TUR TURKEY RABIES CASES 1. 7.92 - 30. 9.92															
LOCATION	DOMESTIC ANIMALS						WILD ANIMALS						T		
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	HUMAN CASES	
01 ADANA	3	1	-	-	-	-	4						0		4
02 ADIYAMAN	3	-	1-0	1-	1	-	4					1	0		4
03 AFYON	1		-	_	_	-	1						0		1
06 ANKARA	2		-	_	-	-	2						0		2
07 ANTALYA	- 1	-	1	-	_	_	1		1		6	1	0		1
09 AYDIN	2	-	-	-	_	-	2						0	1	2
10 BALIKESIR	4	-	-	-	-	-	4					1	0		2 4 3 2 1
14 BOLU	2	-	1	_	-	_	3					1	0	Į	3
16 BURSA	2	_	-	-	-	-	2						0		2
20 DENIZLI							0	-	_	-	-	1	1		1
21 DIYARBAKIR	1	_	1	_	-	-	2			ſ		1	0		2
22 EDIRNE	1	_	_	-	-	_	1			1		1	0		1
27 GAZIANTEP	4	2	1	-	-	1	8						0		8
33 ICEL	1	-	-	-	_	-	1						0		1
34 ISTANBUL	5	-	1	-	-	-	6						0		6
35 IZMIR	1	1	_	_	_	_	2	-	1	_	-	_	1		3
42 KONYA	-	1	-		_	_	1						0	ł	1
43 KUETAHYA	1	-	-	5 5 - 2	_	-	1					1	0		1
45 MANISA	3	-	-	,	-	-	3			1			0	1	3
46 KAHRAMANMARAS	1	-	2	-	-	-	3	1					0		3
49 MUS	-	-	_	1	-	-	1						0		1
54 SAKARYA	8	_	1	_	1	_	10					l	0		10
57 SINOP	_	-	1	-	-	-	1						0		1
64 USAK	1	-	-	1-	-	-	1						0		1
70 KARAMAN	1	-	-	_	_	-	1						0		1
TOTAL	47	5	9	1	2	1	65	0	1	0	0	1	2	0	67
PER CENT	70.1	7.5	13.4	1.5	3.0	1.5	97.0	0.0	1.5	0.0	0.0	1.5	3.0	0.0	100.0

6. List of Contributors

-							
Austria AUT	•	Netherlands NET	Slovenia SVN				
Dr. W. Schuller	Dr.L.G. Schneider	Dr. J.H.M. Nieuwenhuijs	Prof. Dr. Armin Tomašič				
Dr. H. Schnabl	Dr. W.W. Müller	Ministry of Welfare, Health	Ministry of Agriculture,				
Bundesanstalt für	WHO Collaborating Centre	and Cultural Affairs	Forestry and Food				
Tierseuchenbekämpfung	for Rabies Surveillance and	Dr. J.A. Smak	all an				
	Research, Tübingen	Veterinary Service	Spain SPA				
Belgium BEL	T. Müller	Ministry of Agriculture and	Dr. O.Gonzalez Gutierrez-				
Dr. J. Tambeur	Institut für Epizootiologie	Fisheries	Solana				
Ministère de l'Agriculture	und Tierseuchenbekämpfung,		Ministerio de Sanidad y				
	Wusterhausen	Norway NOR	Consumo				
Bulgaria BUL		Dr. G. Bakken					
Dr. N.T. Belev	Greece GRE	-1-7					
Ministère de l'Agriculture	Dr. A. Zambounis	Agriculture	Ministerio de Agricultura,				
	Dr. E. Tsaglas	Department of Veterinary	Pesca y Alimentacion				
Croatia CRO	Ministry of Agriculture	Services					
Dr. S. Juzbašić							
Ministry of Agriculture,	Hungary HUN	Poland POL	Sweden SWE				
Forestry and Water Manage-	Dr. Ferenc Simor	Dr. Jan Kolasz	Dr. B. Nordblom				
ment	Dr. Bálint Kerekes	Ministry of Agriculture	National Board of Agricul-				
	Ministry of Agriculture	Dr. Danuta Serokova	ture				
Dr. M. Brstilo		National Institute of Hygiene	Veterinary and Animal Pro-				
State Veterinary Service	Iceland ICE		duction Department				
	Dr. Brynjolfur Sandholt	Portugal POR					
Dr. Ž. Čač	Chief Veterinary Officer	Dr.C.A.M.de Andrade Fontes	Switzerland SWI				
Croatian Veterinary Institute		Direccao-Geral da Pecuaria	Dr. R. Zanoni				
	Ireland IRE		Dr. A. Kappeler				
Czechoslovakia CZE	Dr. J.A. Costelloe	Romania ROM	Vet.Bacteriological Institute				
Dr. O. Matouch	Dr. I. O'Boyle	Dr. Horatiu Olaru	University of Berne				
National Rabies Laboratory	Department of Agriculture	Ministère de l'Agriculture					
State Veterinary Institute			Turkey TUR				
	Italy ITA		Dr. E. Istanbulluoglu				
Denmark DEN	Dr. S. Prosperi	Russian Federation RUS	Ministry of Agriculture,				
Dr. E. Stougaard	Istituto di Malatti Infettive	(European part only)	Forestry and Rural Affairs				
Veterinaerdirektoratet	Univ. degli Studi di Bologna						
Estonia EST	Latvia LVA	Prof. G.F. Koromyslov	United Kingdom UNK				
Dr. M. Nautras	Prof. J. Rimeicans	WHO Collaborating Centre	Dr. K.C. Meldrum				
Ministry of Agriculture	State Veterinary Department	on Prevention and Control of	Dr. P.J. Thomas				
		Zoonoses	Ministry of Agriculture,				
Finland FIN	Dr. Z. Andersons	The Kovalenko All-Union	Fisheries and Food				
Dr. R. Berger	Latvian State Scientific Re-	Institute of Experimental					
Dr. Saara Reinius	search Institute	Veterinary Medicine, Moscow					
Ministry of Agriculture and		•	Yugoslavia YUG				
Forestry	Lithuania LTU	Prof. B.L. Cherkasskiy	Dr. M. Radovanovic				
	Dr. A. Dranseika	WHO Collaborating Centre	Dr. D. Jakovljevic				
France FRA	State Veterinary Service	on Zoonoses	Fed. Committee Agriculture				
Dr. M. Aubert		Central Research Institute of	red. Committee Agriculture				
WHO Collaborating Centre	Luxembourg LUX	Epidemiology, Ministry of	Dr. Milos Petrovic				
for Research and Manage-	Dr. J. Kremer	Public Health, Moscow	Pasteur Institute, Novi Sad				
ment in Zoonoses (CNEVA)		tand recolded the state of the	radion libitato, novi dad				
Nancy	3						



The Late of the La

WHO Coll. Centre Tuebingen / DEU Rabies Cases Turkey 3rd Quarter 1992 Black Sea BUL 67 cases reported SSR 57 • 39 37 36 67 GRE 55 61 52 54 18 29 14 69 60 ° 25 24 • 66 58 **IRA** 26 62 12 40 • 43 • 23 38 ₩. 68 45 • 3 64 21 • 56 . 30 42 32 46 • 47 IRQ 63 15 27 • 70 33 SYR

Med. Sea

